Martin Krger

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

234 papers	8,557 citations	47 h-index	82 g-index
260 ext. papers	9,583 ext. citations	4.7 avg, IF	6.69 L-index

#	Paper	IF	Citations
234	Efficient generation of self-avoiding, semiflexible rotational isomeric chain ensembles in bulk, in confined geometries, and on surfaces. *Computer Physics Communications*, **2022**, 270, 108176	4.2	1
233	Forecast of Omicron Wave Time Evolution. *Covid*, **2022**, 2, 216-229		2
232	Validation and Refinement of Unified Analytic Model for Flexible and Semiflexible Polymer Melt Entanglement.. *Macromolecules*, **2022**, 55, 3613-3626	5.5	0
231	SIR-Solution for Slowly Time-Dependent Ratio between Recovery and Infection Rates **2022**, 4, 504-524	2.1	0
230	Computational design of shape memory polymer nanocomposites. *Polymer*, **2021**, 217, 123476	3.9	4
229	Analytical solution of the SIR-model for the temporal evolution of epidemics: part B. Semi-time case. *Journal of Physics A: Mathematical and Theoretical*, **2021**, 54, 175601	2	17
228	Sticky Rouse Time Features the Self-Adhesion of Supramolecular Polymer Networks. *Macromolecules*, **2021**, 54, 5053-5064	5.5	2
227	Analytical Modeling of the Temporal Evolution of Epidemics Outbreaks Accounting for Vaccinations **2021**, 3, 386-426	2.1	11
226	Drag on a spherical particle at the air–liquid interface: Interplay between compressibility, Marangoni flow, and surface viscosities. *Physics of Fluids*, **2021**, 33, 062103	4.4	3
225	Reasonable Limiting of 7-Day Incidence per Hundred Thousand and Herd Immunization in Germany and Other Countries. *Covid*, **2021**, 1, 130-136		1
224	Epidemics Forecast From SIR-Modeling, Verification and Calculated Effects of Lockdown and Lifting of Interventions. *Frontiers in Physics*, **2021**, 8,	3.9	3
223	Reconfigurable artificial microswimmers with internal feedback. *Nature Communications*, **2021**, 12, 4762	17.4	8
222	Verification of the accuracy of the SIR model in forecasting based on the improved SIR model with a constant ratio of recovery to infection rate by comparing with monitored second wave data. *Royal Society Open Science*, **2021**, 8, 211379	3.3	5
221	Explicit formulae for the peak time of an epidemic from the SIR model. Which approximant to use?. *Physica D: Nonlinear Phenomena*, **2021**, 425, 132981	3.3	8
220	Insights from modeling into structure, entanglements, and dynamics in attractive polymer nanocomposites. *Soft Matter*, **2021**, 17, 6362-6373	3.6	4
219	Atomistic Modeling of Plastic Deformation in Semicrystalline Polyethylene: Role of Interphase Topology, Entanglements, and Chain Dynamics. *Macromolecules*, **2020**, 53, 4605-4617	5.5	11
218	Covid-19 Predictions Using a Gauss Model, Based on Data from April 2 **2020**, 2, 197-212	2.1	28

217	Surface Rheology and Structure of Model Triblock Copolymers at a Liquid–Vapor Interface: A Molecular Dynamics Study. *Macromolecules*, **2020**, 53, 1245-1257	5.5	3
216	Unified Analytic Expressions for the Entanglement Length, Tube Diameter, and Plateau Modulus of Polymer Melts. *Physical Review Letters*, **2020**, 124, 147801	7.4	9
215	A two-enzyme cascade reaction consisting of two reaction pathways. Studies in bulk solution for understanding the performance of a flow-through device with immobilised enzymes.. *RSC Advances* , **2020**, 10, 18655-18676	3.7	7
214	Analytical solution of the SIR-model for the temporal evolution of epidemics. Part A: time-independent reproduction factor. *Journal of Physics A: Mathematical and Theoretical*, **2020**, 53, 505601	2	29
213	Gaussian Doubling Times and Reproduction Factors of the COVID-19 Pandemic Disease. *Frontiers in Physics*, **2020**, 8,	3.9	7
212	Polymer Conformations, Entanglements and Dynamics in Ionic Nanocomposites: A Molecular Dynamics Study. *Polymers*, **2020**, 12,	4.5	1
211	Tuning Electrokinetic Flow, Ionic Conductance, and Selectivity in a Solid-State Nanopore Modified with a pH-Responsive Polyelectrolyte Brush: A Molecular Theory Approach. *Journal of Physical Chemistry C*, **2020**, 124, 18513-18531	3.8	3
210	Time Correlation Functions of Equilibrium and Nonequilibrium Langevin Dynamics: Derivations and Numerics Using Random Numbers. *SIAM Review*, **2020**, 62, 901-935	7.4	4
209	Dynamics of interacting magnetic nanoparticles: effective behavior from competition between Brownian and Néel relaxation. *Physical Chemistry Chemical Physics*, **2020**, 22, 22244-22259	3.6	15
208	Efficient hybrid algorithm for the dynamic creation of wormlike chains in solutions, brushes, melts and glasses. *Computer Physics Communications*, **2019**, 241, 178-179	4.2	2
207	Assessment of the Tumbling-Snake Model against Linear and Nonlinear Rheological Data of Bidisperse Polymer Blends. *Polymers*, **2019**, 11,	4.5	4
206	Hybrid Dendronized Polymers as Molecular Objects: Viscoelastic Properties in the Melt. *Macromolecules*, **2019**, 52, 7331-7342	5.5	6
205	Gas-liquid phase equilibrium of a model Langmuir monolayer captured by a multiscale approach. *Physical Chemistry Chemical Physics*, **2019**, 21, 2295-2306	3.6	9
204	Emergence of stationary uphill currents in 2D Ising models: the role of reservoirs and boundary conditions. *European Physical Journal: Special Topics*, **2019**, 228, 69-91	2.3	0
203	Structure Elucidation of 2D Polymer Monolayers Based on Crystallization Estimates Derived from Tip-Enhanced Raman Spectroscopy (TERS) Polymerization Conversion Data. *Journal of the American Chemical Society*, **2019**, 141, 9867-9871	16.4	15
202	Modeling of Entangled Polymer Diffusion in Melts and Nanocomposites: A Review. *Polymers*, **2019**, 11,	4.5	22
201	3D Conformations of Thick Synthetic Polymer Chains Observed by Cryogenic Electron Microscopy. *ACS Nano*, **2019**, 13, 3466-3473	16.7	8
200	Interplay between ligand mobility and nanoparticle geometry during cellular uptake of PEGylated liposomes and bicelles. *Nanoscale*, **2019**, 11, 15971-15983	7.7	4

199	Can one determine the density of an individual synthetic macromolecule?. *Soft Matter*, **2019**, 15, 6547-6556	3.8	
198	Relaxation Behavior and Nonlinear Surface Rheology of PEO-PPO-PEO Triblock Copolymers at the Air-Water Interface. *Langmuir*, **2019**, 35, 14388-14396	4	5
197	Polymer stiffness governs template mediated self-assembly of liposome-like nanoparticles: simulation, theory and experiment. *Nanoscale*, **2019**, 11, 20179-20193	7.7	5
196	A Detailed Examination of the Topological Constraints of Lamellae-Forming Block Copolymers. *Macromolecules*, **2018**, 51, 2110-2124	5.5	15
195	Unraveling two-dimensional polymerization in the single crystal. *Journal of Applied Crystallography*, **2018**, 51, 481-497	3.8	21
194	Aggregation of polyethylene glycol polymers suppresses receptor-mediated endocytosis of PEGylated liposomes. *Nanoscale*, **2018**, 10, 4545-4560	7.7	46
193	Size of graphene sheets determines the structural and mechanical properties of 3D graphene foams. *Nanotechnology*, **2018**, 29, 104001	3.4	19
192	Tumbling-Snake Model for Polymeric Liquids Subjected to Biaxial Elongational Flows with a Focus on Planar Elongation. *Polymers*, **2018**, 10,	4.5	4
191	Pushing Synthesis toward the Maximum Generation Range of Dendritic Macromolecules. *Macromolecules*, **2018**, 51, 5420-5429	5.5	8
190	What causes the anomalous aggregation in pluronic aqueous solutions?. *Soft Matter*, **2018**, 14, 7653-7663	3.6	7
189	A Two-Dimensional Polymer Synthesized at the Air/Water Interface. *Angewandte Chemie*, **2018**, 130, 10744-10748	3.6	7
188	A Two-Dimensional Polymer Synthesized at the Air/Water Interface. *Angewandte Chemie - International Edition*, **2018**, 57, 10584-10588	16.4	44
187	Dynamics and Wetting Behavior of Core-Shell Soft Particles at a Fluid-Fluid Interface. *Langmuir*, **2018**, 34, 15370-15382	4	13
186	Ordering and Crystallization of Entangled Polyethylene Melts under Uniaxial Tension: A Molecular Dynamics Study. *Macromolecules*, **2018**, 51, 9635-9648	5.5	27
185	Combined Experimental and Simulation Studies of Cross-Linked Polymer Brushes under Shear. *Macromolecules*, **2018**, 51, 10174-10183	5.5	14
184	Surface Disentanglement and Slip in a Polymer Melt: A Molecular Dynamics Study. *Macromolecules*, **2018**, 51, 8996-9010	5.5	3
183	Miscibility and Nanoparticle Diffusion in Ionic Nanocomposites. *Polymers*, **2018**, 10,	4.5	9
182	From intermediate anisotropic to isotropic friction at large strain rates to account for viscosity thickening in polymer solutions. *Journal of Chemical Physics*, **2018**, 148, 184903	3.9	5

181	Self-assembled core-polyethylene glycol-lipid shell nanoparticles demonstrate high stability in shear flow. *Physical Chemistry Chemical Physics*, **2017**, 19, 13294-13306	3.6	19
180	Communication: Appearance of undershoots in start-up shear: Experimental findings captured by tumbling-snake dynamics. *Journal of Chemical Physics*, **2017**, 146, 161101	3.9	25
179	Molecular dynamics simulations of polymer crystallization under confinement: Entanglement effect. *Polymer*, **2017**, 109, 71-84	3.9	49
178	Non-constant link tension coefficient in the tumbling-snake model subjected to simple shear. *Journal of Chemical Physics*, **2017**, 147, 174903	3.9	8
177	Assessing numerical methods for molecular and particle simulation. *Soft Matter*, **2017**, 13, 8565-8578	3.6	13
176	Carbon Nanotube Length Governs the Viscoelasticity and Permeability of Buckypaper. *Polymers*, **2017**, 9,	4.5	13
175	Boundaries steer the contraction of active gels. *Nature Communications*, **2016**, 7, 13120	17.4	39
174	Effect of Crosslinking on the Microtribological Behavior of Model Polymer Brushes. *Tribology Letters*, **2016**, 63, 1	2.8	20
173	Molecular simulation guided constitutive modeling on finite strain viscoelasticity of elastomers. *Journal of the Mechanics and Physics of Solids*, **2016**, 88, 204-226	5	67
172	Modeling of Polymer Structure and Conformations in Polymer Nanocomposites from Atomistic to Mesoscale: A Review. *Polymer Reviews*, **2016**, 56, 385-428	14	97
171	Influence of molecular architecture on the entanglement network: topological analysis of linear, long- and short-chain branched polyethylene melts via Monte Carlo simulations. *Soft Matter*, **2016**, 12, 3770-86	3.6	21
170	Influence of Chain Stiffness, Grafting Density and Normal Load on the Tribological and Structural Behavior of Polymer Brushes: A Nonequilibrium-Molecular-Dynamics Study. *Polymers*, **2016**, 8,	4.5	19
169	Self-assembly of core-polyethylene glycol-lipid shell (CPLS) nanoparticles and their potential as drug delivery vehicles. *Nanoscale*, **2016**, 8, 14821-35	7.7	25
168	Entanglements and Crystallization of Concentrated Polymer Solutions: Molecular Dynamics Simulations. *Macromolecules*, **2016**, 49, 9017-9025	5.5	39
167	Solution of the complete Curtiss-Bird model for polymeric liquids subjected to simple shear flow. *Journal of Chemical Physics*, **2016**, 144, 124905	3.9	11
166	Fast equilibration protocol for million atom systems of highly entangled linear polyethylene chains. *Journal of Chemical Physics*, **2016**, 144, 154901	3.9	27
165	Rheology and Packing of Dendronized Polymers. *Macromolecules*, **2016**, 49, 7054-7068	5.5	28
164	Internal organization of macromonomers and dendronized polymers based on thiophene dendrons. *Soft Matter*, **2015**, 11, 1116-26	3.6	5

163	Shape effect in cellular uptake of PEGylated nanoparticles: comparison between sphere, rod, cube and disk. *Nanoscale*, **2015**, 7, 16631-46	7.7	204
162	Polymer Brushes under Shear: Molecular Dynamics Simulations Compared to Experiments. *Langmuir*, **2015**, 31, 4798-805	4	38
161	Poly(N-isopropylacrylamide) Phase Diagrams: Fifty Years of Research. *Angewandte Chemie - International Edition*, **2015**, 54, 15342-67	16.4	557
160	Poly(N-isopropylacrylamid)-Phasendiagramme: 50 Jahre Forschung. *Angewandte Chemie*, **2015**, 127, 15558-15586	3.6	15
159	Simple, admissible, and accurate approximants of the inverse Langevin and Brillouin functions, relevant for strong polymer deformations and flows. *Journal of Non-Newtonian Fluid Mechanics*, **2015**, 223, 77-87	2.7	58
158	Modeling Nanosized Single Molecule Objects: Dendronized Polymers Adsorbed onto Mica. *Journal of Physical Chemistry C*, **2015**, 119, 3746-3753	3.8	11
157	Dynamic structure of unentangled polymer chains in the vicinity of non-attractive nanoparticles. *Soft Matter*, **2014**, 10, 1723-37	3.6	67
156	Dendronized Polymers: Molecular Objects between Conventional Linear Polymers and Colloidal Particles. *ACS Macro Letters*, **2014**, 3, 991-998	6.6	56
155	Interactions in dendronized polymers: intramolecular dominates intermolecular. *Soft Matter*, **2014**, 10, 1032-44	3.6	16
154	The effect of polymer chain length on the mechanical properties of triblock copolymer gels. *Chemical Physics Letters*, **2014**, 612, 157-161	2.5	21
153	Endocytosis of PEGylated nanoparticles accompanied by structural and free energy changes of the grafted polyethylene glycol. *Biomaterials*, **2014**, 35, 8467-78	15.6	142
152	Microscopic Origin of the Non-Newtonian Viscosity of Semiflexible Polymer Solutions in the Semidilute Regime.. *ACS Macro Letters*, **2014**, 3, 136-140	6.6	27
151	Primitive-path statistics of entangled polymers: mapping multi-chain simulations onto single-chain mean-field models. *New Journal of Physics*, **2014**, 16, 015027	2.9	33
150	Pulling-force-induced elongation and alignment effects on entanglement and knotting characteristics of linear polymers in a melt. *Physical Review E*, **2014**, 90, 042602	2.4	10
149	Challenges in Multiscale Modeling of Polymer Dynamics. *Polymers*, **2013**, 5, 751-832	4.5	143
148	Application of full flow field reconstruction to a viscoelastic liquid in a 2D cross-slot channel. *Journal of Non-Newtonian Fluid Mechanics*, **2013**, 192, 10-19	2.7	2
147	Branching Defects in Dendritic Molecules: Coupling Efficiency and Congestion Effects. *Macromolecules*, **2013**, 46, 7550-7564	5.5	11
146	Computer simulation of dendronized polymers: organization and characterization at the atomistic level. *RSC Advances*, **2013**, 3, 126-140	3.7	24

145	Direct observation of the dynamics of semiflexible polymers in shear flow. *Physical Review Letters*, **2013**, 110, 108302	7.4	83
144	Effect of polymer solvent on the mechanical properties of entangled polymer gels: Coarse-grained molecular simulation. *Polymer*, **2013**, 54, 2555-2564	3.9	27
143	Synthetic regimes due to packing constraints in dendritic molecules confirmed by labelling experiments. *Nature Communications*, **2013**, 4, 1993	17.4	19
142	Computer simulation of fifth generation dendronized polymers: impact of charge on internal organization. *Journal of Physical Chemistry B*, **2013**, 117, 6007-17	3.4	20
141	Kinetics of gene derepression by ERK signaling. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 10330-5	11.5	43
140	Correction for Tagliazucchi et al., Effect of charge, hydrophobicity, and sequence of nucleoporins on the translocation of model particles through the nuclear pore complex. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 10336-10337	11.5	4
139	Writhe and mutual entanglement combine to give the entanglement length. *Physical Review E*, **2013**, 88, 062604	2.4	20
138	Effect of charge, hydrophobicity, and sequence of nucleoporins on the translocation of model particles through the nuclear pore complex. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 3363-8	11.5	113
137	Theoretical considerations on mechanisms of harvesting cells cultured on thermoresponsive polymer brushes. *Biomaterials*, **2012**, 33, 4975-87	15.6	49
136	Nanoparticle Geometrical Effect on Structure, Dynamics and Anisotropic Viscosity of Polyethylene Nanocomposites. *Macromolecules*, **2012**, 45, 2099-2112	5.5	87
135	Fibers with integrated mechanochemical switches: minimalistic design principles derived from fibronectin. *Biophysical Journal*, **2012**, 103, 1909-18	2.9	22
134	Viscoelasticity of carbon nanotube buckypaper: zipping–unzipping mechanism and entanglement effects. *Soft Matter*, **2012**, 8, 7822	3.6	35
133	Entanglements and Dynamics of Polymer Melts near a SWCNT. *Macromolecules*, **2012**, 45, 7274-7281	5.5	45
132	A predictive multiscale computational framework for viscoelastic properties of linear polymers. *Polymer*, **2012**, 53, 5935-5952	3.9	91
131	Nanoparticle effect on the dynamics of polymer chains and their entanglement network. *Physical Review Letters*, **2012**, 109, 118001	7.4	141
130	Computational study on entanglement length and pore size of carbon nanotube buckypaper. *Applied Physics Letters*, **2012**, 100, 021907	3.4	21
129	Thermoresponsive cell culture substrates based on PNIPAM brushes functionalized with adhesion peptides: theoretical considerations of mechanism and design. *Langmuir*, **2012**, 28, 16623-37	4	29
128	Evolution of fivefold local symmetry during crystal nucleation and growth in dense hard-sphere packings. *Soft Matter*, **2012**, 8, 844-858	3.6	38

127	A theoretical evaluation of the effects of carbon nanotube entanglement and bundling on the structural and mechanical properties of buckypaper. *Carbon*, **2012**, 50, 1793-1806	10.4	81
126	Adsorption of core-shell nanoparticles at liquid–liquid interfaces. *Soft Matter*, **2011**, 7, 7663	3.6	75
125	Molecularly derived constitutive equation for low-molecular polymer melts from thermodynamically guided simulation. *Journal of Rheology*, **2011**, 55, 69-93	4.1	26
124	Smooth full field reconstruction of velocity and its gradients from noisy scattered velocimetry data in a cross-slot flow. *Journal of Rheology*, **2011**, 55, 353-377	4.1	8
123	Hard vs soft constraints in the full field reconstruction of incompressible flow kinematics from noisy scattered velocimetry data. *Journal of Rheology*, **2011**, 55, 1187-1203	4.1	5
122	Colloid-Brush Interactions: The Effect of Solvent Quality. *Macromolecules*, **2011**, 44, 3622-3638	5.5	61
121	Morphology control of hairy nanopores. *ACS Nano*, **2011**, 5, 4737-47	16.7	80
120	Primitive chain network study on uncrosslinked and crosslinked cis-polyisoprene polymers. *Polymer*, **2011**, 52, 5867-5878	3.9	45
119	The Largest Synthetic Structure with Molecular Precision: Towards a Molecular Object. *Angewandte Chemie*, **2011**, 123, 763-766	3.6	20
118	The largest synthetic structure with molecular precision: towards a molecular object. *Angewandte Chemie - International Edition*, **2011**, 50, 737-40	16.4	102
117	Collapse of Thermoresponsive Brushes and the Tuning of Protein Adsorption. *Macromolecules*, **2011**, 44, 6986-7005	5.5	79
116	Using mesoscopic models to design strong and tough biomimetic polymer networks. *Langmuir*, **2011**, 27, 13796-805	4	18
115	Height and Width of Adsorbed Dendronized Polymers: Electron and Atomic Force Microscopy of Homologous Series. *Macromolecules*, **2011**, 44, 6785-6792	5.5	41
114	Influence of Nanorod Inclusions on Structure and Primitive Path Network of Polymer Nanocomposites at Equilibrium and Under Deformation. *Macromolecules*, **2011**, 44, 1034-1045	5.5	83
113	Ideal contribution to the macroscopic quasiequilibrium entropy of anisotropic fluids. *Physical Review E*, **2011**, 83, 061713	2.4	8
112	From Dendrimers to Dendronized Polymers and Forests: Scaling Theory and its Limitations. *Macromolecules*, **2010**, 43, 6213-6224	5.5	76
111	Flow Effects on Melt Structure and Entanglement Network of Linear Polymers: Results from a Nonequilibrium Molecular Dynamics Simulation Study of a Polyethylene Melt in Steady Shear. *Macromolecules*, **2010**, 43, 6886-6902	5.5	128
110	Understanding Dynamics in Binary Mixtures of Entangledcis-1,4-Polybutadiene Melts at the Level of Primitive Path Segments by Mapping Atomistic Simulation Data onto the Tube Model. *Macromolecules*, **2010**, 43, 8239-8250	5.5	28

109	Quantifying chain reptation in entangled polymer melts: topological and dynamical mapping of atomistic simulation results onto the tube model. *Journal of Chemical Physics*, **2010**, 132, 124904	3.9	87
108	Modelling and confocal microscopy of biopolymer mixtures in confined geometries. *Soft Matter*, **2010**, 6, 2713	3.6	10
107	Rubik Cylinder Model for Dendronized Polymers. *Journal of Computational and Theoretical Nanoscience*, **2010**, 7, 661-674	0.3	2
106	Automated symbolic calculations in nonequilibrium thermodynamics. *Computer Physics Communications*, **2010**, 181, 2149-2157	4.2	23
105	Effect of network topology on phase separation in two-dimensional Lennard-Jones networks. *Physical Review E*, **2009**, 79, 040401	2.4	6
104	Boltzmann equation and hydrodynamic fluctuations. *Physical Review E*, **2009**, 80, 051202	2.4	14
103	Systematic time-scale-bridging molecular dynamics applied to flowing polymer melts. *Physical Review E*, **2009**, 79, 011802	2.4	47
102	Combined molecular algorithms for the generation, equilibration and topological analysis of entangled polymers: methodology and performance. *International Journal of Molecular Sciences*, **2009**, 10, 5054-89	6.3	124
101	Flow of branched polymer melts in a lubricated cross-slot channel: a combined computational and experimental study. *Rheologica Acta*, **2009**, 48, 97-108	2.3	12
100	Ternary protein adsorption onto brushes: strong versus weak. *Langmuir*, **2009**, 25, 11621-34	4	54
99	Tuning polymer thickness: synthesis and scaling theory of homologous series of dendronized polymers. *Journal of the American Chemical Society*, **2009**, 131, 11841-54	16.4	121
98	Phase Behavior and Formation Dynamics of Helically Wound Networks: Generalized Janus Chain Model. *Macromolecules*, **2009**, 42, 576-579	5.5	9
97	Detailed atomistic molecular dynamics simulations of alpha-conotoxin AuIB in water. *Journal of Physical Chemistry B*, **2009**, 113, 5016-24	3.4	7
96	Structure, dimensions, and entanglement statistics of long linear polyethylene chains. *Journal of Physical Chemistry B*, **2009**, 113, 442-55	3.4	56
95	Topological analysis of polymeric melts: chain-length effects and fast-converging estimators for entanglement length. *Physical Review E*, **2009**, 80, 031803	2.4	214
94	Random packing of model polymers: local structure, topological hindrance and universal scaling. *Soft Matter*, **2009**, 5, 1762	3.6	40
93	Model of Microphase Separation in Two-Dimensional Gels. *Macromolecules*, **2008**, 41, 3267-3275	5.5	3
92	Universal scaling, entanglements, and knots of model chain molecules. *Physical Review Letters*, **2008**, 101, 265702	7.4	44

91	Exact linear hydrodynamics from the Boltzmann equation. *Physical Review Letters*, **2008**, 100, 214503	7.4	15
90	Nonaffine deformation of inherent structure as a static signature of cooperativity in supercooled liquids. *Physical Review Letters*, **2008**, 101, 095501	7.4	22
89	Self-Folding of Charged Single Dendronized Polymers. *Advanced Materials*, **2008**, 20, 3204-3210	24	30
88	Rheological and entanglement characteristics of linear-chain polyethylene liquids in planar Couette and planar elongational flows. *Journal of Non-Newtonian Fluid Mechanics*, **2008**, 152, 168-183	2.7	48
87	Consistent closure schemes for statistical models of anisotropic fluids. *Journal of Non-Newtonian Fluid Mechanics*, **2008**, 149, 40-55	2.7	44
86	Lubricated optical rheometer for the study of two-dimensional complex flows of polymer melts. *Journal of Non-Newtonian Fluid Mechanics*, **2008**, 150, 43-55	2.7	20
85	Lubricated cross-slot flow of a low density polyethylene melt. *Journal of Non-Newtonian Fluid Mechanics*, **2008**, 154, 52-64	2.7	12
84	Formation of double helical and filamentous structures in models of physical and chemical gels. *Soft Matter*, **2007**, 4, 18-28	3.6	26
83	Landmark Paper Index: Application to Rheological (E) Journals. *Applied Rheology*, **2007**, 17, 66494-1-66494-6	1.2	
82	From atomistic simulation to the dynamics, structure and helical network formation of dendronized polymers: the Janus chain model. *Journal of Chemical Physics*, **2007**, 127, 094904	3.9	21
81	Filamentous networks in phase-separating two-dimensional gels. *Europhysics Letters*, **2007**, 77, 58007	1.6	17
80	Hyperbolicity of exact hydrodynamics for three-dimensional linearized Grad's equations. *Physical Review E*, **2007**, 76, 022201	2.4	12
79	From hyperbolic regularization to exact hydrodynamics for linearized Grad's equations. *Physical Review E*, **2007**, 75, 051204	2.4	17
78	Derivation of Frank-Ericksen elastic coefficients for polydomain nematics from mean-field molecular theory for anisotropic particles. *Journal of Chemical Physics*, **2007**, 127, 034903	3.9	18
77	Primitive Path Networks Generated by Annealing and Geometrical Methods: Insights into Differences. *Macromolecules*, **2007**, 40, 2897-2903	5.5	160
76	Phoretic forces on convex particles from kinetic theory and nonequilibrium thermodynamics. *Journal of Chemical Physics*, **2006**, 124, 044511	3.9	5
75	Unifying kinetic approach to phoretic forces and torques onto moving and rotating convex particles. *Journal of Chemical Physics*, **2006**, 125, 44105	3.9	12
74	Primitive Path Identification and Entanglement Statistics in Polymer Melts: Results from Direct Topological Analysis on Atomistic Polyethylene Models. *Macromolecules*, **2006**, 39, 4207-4216	5.5	137

73	Multiscale Modeling of Viscoelastic Materials Containing Rigid Nonrotating Inclusions. *Multiscale Modeling and Simulation*, **2006**, 5, 759-785	1.8	6
72	Landmark Paper Index: Definition and Application to Rheological (E) Journals. *Applied Rheology*, **2006**, 16, 329-333	1.2	4
71	Symbolic computation of the phoretic acceleration of convex particles suspended in a non-uniform gas. *Computer Physics Communications*, **2006**, 175, 650-664	4.2	1
70	An extended FENE dumbbell model theory for concentration dependent shear-induced anisotropy in dilute polymer solutions: addenda. *Journal of Non-Newtonian Fluid Mechanics*, **2005**, 125, 87-90	2.7	3
69	Shortest multiple disconnected path for the analysis of entanglements in two- and three-dimensional polymeric systems. *Computer Physics Communications*, **2005**, 168, 209-232	4.2	310
68	Structure and rheology of model-ferrofluids under shear flow. *Journal of Magnetism and Magnetic Materials*, **2005**, 289, 325-327	2.8	25
67	Publication Specific Impact of Articles Published by Rheological Journals. *Applied Rheology*, **2005**, 15, 406-409	1.2	1
66	Magnetoviscosity of semidilute ferrofluids and the role of dipolar interactions: comparison of molecular simulations and dynamical mean-field theory. *Physical Review E*, **2005**, 71, 031205	2.4	44
65	Anisotropy of the magnetoviscous effect in ferrofluids. *Physical Review E*, **2005**, 71, 051201	2.4	23
64	Anisotropic self-diffusion in ferrofluids studied via Brownian dynamics simulations. *Physical Review E*, **2005**, 72, 031504	2.4	19
63	Regular and Chaotic Rheological Behavior of Tumbling Polymeric Liquid Crystals **2005**, 295-333		3
62	Microscopic structure, dynamics, and wear at metal-metal interfaces in sliding contact. *Physical Review E*, **2004**, 70, 066139	2.4	5
61	Structural changes and viscoplastic behavior of a generic embedded-atom model metal in steady shear flow. *Physical Review E*, **2004**, 69, 021509	2.4	15
60	Linear Viscoelastic Behavior of Unentangled Polymer Melts via Non-Equilibrium Molecular Dynamics. *Macromolecular Theory and Simulations*, **2004**, 13, 748-753	1.5	31
59	Pressure, dynamics, and structure of a simple particle system confined in a soft nanopore. *Physica A: Statistical Mechanics and Its Applications*, **2004**, 337, 443-469	3.3	1
58	Beyond-equilibrium molecular dynamics of a rarefied gas subjected to shear flow. *Journal of Non-Newtonian Fluid Mechanics*, **2004**, 120, 175-187	2.7	13
57	The hybrid BDDFS method: memory saving approach for CONNFFESSIT-type simulations. *Journal of Non-Newtonian Fluid Mechanics*, **2004**, 122, 147-158	2.7	4
56	Simple models for complex nonequilibrium fluids. *Physics Reports*, **2004**, 390, 453-551	27.7	238

55	Regular and chaotic orientational and rheological behaviour of liquid crystals. *Journal of Physics Condensed Matter*, **2004**, 16, S3835-S3859	1.8	31
54	Magnetoviscous model fluids. *Journal of Physics Condensed Matter*, **2003**, 15, S1403-S1423	1.8	31
53	Canonical distribution functions in polymer dynamics. (II). Liquid-crystalline polymers. *Physica A: Statistical Mechanics and Its Applications*, **2003**, 319, 134-150	3.3	30
52	Crossover from the Rouse to the Entangled Polymer Melt Regime: Signals from Long, Detailed Atomistic Molecular Dynamics Simulations, Supported by Rheological Experiments. *Macromolecules* , **2003**, 36, 1376-1387	5.5	179
51	Towards Multiscale Modeling of Metals via Embedded Particle Computer Simulation. *Multiscale Modeling and Simulation*, **2003**, 1, 25-39	1.8	8
50	Crossover between short- and long-time behavior of stress fluctuations and viscoelasticity of liquids. *Physical Review E*, **2003**, 67, 042201	2.4	14
49	Phase behavior and structure of Janus fluids. *Physical Review E*, **2003**, 67, 041209	2.4	31
48	Dynamics of colloidal suspensions of ferromagnetic particles in plane Couette flow: comparison of approximate solutions with Brownian dynamics simulations. *Physical Review E*, **2003**, 67, 061401	2.4	18
47	Viscoelastic flows studied by smoothed particle dynamics. *Journal of Non-Newtonian Fluid Mechanics*, **2002**, 105, 35-51	2.7	98
46	Chaotic and regular shear-induced orientational dynamics of nematic liquid crystals. *Physica A: Statistical Mechanics and Its Applications*, **2002**, 315, 537-568	3.3	51
45	Projection from an atomistic chain contour to its primitive path. *Polymer*, **2002**, 43, 477-487	3.9	33
44	Recognition and analysis of local structure in polycrystalline configurations. *Computer Physics Communications*, **2002**, 145, 371-384	4.2	24
43	Magnetization dynamics, rheology, and an effective description of ferromagnetic units in dilute suspension. *Physical Review E*, **2002**, 66, 021501	2.4	36
42	Magnetoviscosity and orientational order parameters of dilute ferrofluids. *Journal of Chemical Physics*, **2002**, 116, 9078-9088	3.9	27
41	Rotation and Deformation of a Finitely Extendable Flexible Polymer Molecule in a Steady Shear Flow. *Macromolecules*, **2002**, 35, 8621-8630	5.5	41
40	Chaotic orientational behavior of a nematic liquid crystal subjected to a steady shear flow. *Physical Review E*, **2002**, 66, 040702	2.4	55
39	Symbolic test of the Jacobi identity for given generalized Poisson bracket. *Computer Physics Communications*, **2001**, 137, 325-340	4.2	13
38	Thermophysical properties of gases, liquids, and solids composed of particles interacting with a short-range attractive potential. *Physical Review E*, **2001**, 64, 011201	2.4	14

37	A simple example for comparing GENERIC with rational non-equilibrium thermodynamics. *Physica A: Statistical Mechanics and Its Applications*, **2000**, 285, 448-466	3.3	25
36	Solid Friction studied via Non-Equilibrium Molecular Dynamics Computer Simulations. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2000**, 80, 49-52	1	2
35	Pressure of fluids and solids composed of particles interacting with a short-range repulsive potential. *Physical Review E*, **2000**, 61, 4629-31	2.4	7
34	A thermodynamically admissible reptation model for fast flows of entangled polymers. II. Model predictions for shear and extensional flows. *Journal of Rheology*, **2000**, 44, 1293-1317	4.1	100
33	Rheological evidence for a dynamical crossover in polymer melts via nonequilibrium molecular dynamics. *Physical Review Letters*, **2000**, 85, 1128-31	7.4	190
32	Variance reduced Brownian simulation of a bead-spring chain under steady shear flow considering hydrodynamic interaction effects. *Journal of Chemical Physics*, **2000**, 113, 4767-4773	3.9	58
31	Mesoscopic model for the viscosities of nematic liquid crystals. *Physical Review E*, **1999**, 60, 4226-34	2.4	10
30	Efficient hybrid algorithm for the dynamic creation of wormlike chains in solutions, brushes, melts and glasses. *Computer Physics Communications*, **1999**, 118, 278-298	4.2	36
29	Structure and Dynamics of Dilute Polymer Solutions under Shear Flow via Nonequilibrium Molecular Dynamics. *Macromolecules*, **1999**, 32, 5660-5672	5.5	84
28	Micro/mesoscopic approaches to the ring formation in linear wormlike micellar systems. *Macromolecular Symposia*, **1998**, 133, 101-112	0.8	4
27	Nonequilibrium dynamics simulations of simple and polymeric fluids. *Current Opinion in Colloid and Interface Science*, **1998**, 3, 614-619	7.6	1
26	Flow-induced alignment of rod-like and flexible polymers in the molten state. *Physica A: Statistical Mechanics and Its Applications*, **1998**, 249, 332-336	3.3	6
25	Thermomechanical properties of the WCA Lennard-Jones model system in its fluid and solid states. *Physica A: Statistical Mechanics and Its Applications*, **1998**, 250, 58-82	3.3	43
24	Fokker-Planck calculations of the viscosities of biaxial fluids. *Physical Review E*, **1997**, 56, 1804-1807	2.4	6
23	Viscosities of Nematic and Discotic Nematic Liquid Crystals According to the Affine Transformation Model. *Molecular Crystals and Liquid Crystals*, **1997**, 300, 245-262		5
22	On the Signs of the Leslie Viscosities α_2 and α_3 for Nematics and Discotic Nematics. *Molecular Crystals and Liquid Crystals*, **1997**, 293, 17-27		5
21	Polymer Melts under Uniaxial Elongational Flow: Stress Optical Behavior from Experiments and Nonequilibrium Molecular Dynamics Computer Simulations. *Macromolecules*, **1997**, 30, 526-539	5.5	106
20	Shear modulus of fluids and solids. *Physica A: Statistical Mechanics and Its Applications*, **1997**, 239, 449-466	3.3	35

19	Rheology: From simple and to complex fluids. *Physica A: Statistical Mechanics and Its Applications*, **1997**, 240, 126-144	3.3	27
18	Erratum to "A program to compute the angular coefficients of the relativistic one-electron hyperfine structure parameters" [Comput. Phys. Commun. 90 (1995) 381–387]. *Computer Physics Communications*, **1997**, 103, 97-99	4.2	2
17	On the Shape and Rheology of Linear Micelles in Dilute Solutions. *Journal De Physique II*, **1997**, 7, 931-946		15
16	An extended FENE dumbbell theory for concentration dependent shear-induced anisotropy in dilute polymer solutions. *Journal of Non-Newtonian Fluid Mechanics*, **1996**, 62, 235-251	2.7	22
15	A novel algorithm to optimize classification trees. *Computer Physics Communications*, **1996**, 95, 58-72	4.2	2
14	Optimization of classification trees: strategy and algorithm improvement. *Computer Physics Communications*, **1996**, 99, 81-93	4.2	1
13	Molecular dynamics of model liquid crystals composed of semiflexible molecules. *Physical Review E*, **1996**, 54, 5178-5186	2.4	47
12	Wormlike micelles under shear flow: A microscopic model studied by nonequilibrium-molecular-dynamics computer simulations. *Physical Review E*, **1996**, 53, 2531-2536	2.4	66
11	Viscosity coefficients for anisotropic, nematic fluids based on structural theories of suspensions. *Journal of Chemical Physics*, **1995**, 103, 807-817	3.9	36
10	A program to compute the angular coefficients of the relativistic one-electron hyperfine structure parameters. *Computer Physics Communications*, **1995**, 90, 381-387	4.2	10
9	NEMD-Computersimulation zur Rheologie von Polymerschmelzen / NEMD Computer Simulation of Polymer Melt Rheology. *Applied Rheology*, **1995**, 5, 66-71	1.2	18
8	On a quantity describing the degree of chain entanglement in linear polymer systems. *Macromolecular Theory and Simulations*, **1994**, 3, 639-647	1.5	27
7	Flow-alignment and rheology of polymer melts: Computation of the single-link orientational distribution function. *Macromolecular Symposia*, **1994**, 81, 83-90	0.8	4
6	Rheology and structural changes of polymer melts via nonequilibrium molecular dynamics. *Journal of Rheology*, **1993**, 37, 1057-1079	4.1	196
5	A molecular theory for spatially inhomogeneous, concentrated solutions of rod-like liquid crystal polymers **1993**, 295-301		4
4	Viscoelasticity of polymeric melts and concentrated solutions. The effect of flow-induced alignment of chain ends. *Physica A: Statistical Mechanics and Its Applications*, **1993**, 195, 336-353	3.3	44
3	Covid-19 Predictions Using a Gauss Model, Based on Data from April 2		4
2	Covid-19 predictions using a Gauss model, based on data from April 2		3

1	Multi-Hamiltonian structure of the epidemics model accounting for vaccinations and a suitable test for the accuracy of its numerical solvers. *Journal of Physics A: Mathematical and Theoretical*,	2	1